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Tourism and economic growth: A review of international literature

Abstract

The development of tourism has become one of the central issues taken up by many countries – in light of the potential benefits it has for the economy. Moreover, the causal link between tourism and economic growth has long been a subject of interest in many studies, with no unanimous agreement on the direction of causality between the two variables. The main arguments that have been put forward on the direction of causality are: Firstly, that tourism causes economic growth (tourism-led growth hypothesis); and secondly, that it is economic growth that leads to the growth of the tourism sector (growth-led tourism hypothesis). In this paper, we review some of the previous empirical studies that have been conducted, in order to examine the causality between tourism-sector development and economic growth in both developed and developing countries. These studies have used time series data analysis, panel/cross sectional data analysis as well as input/output analysis. Our empirical literature review shows that the causal relationship between tourism and economic growth differs from country to country; and it is dependent on the methodology used. On balance however, we find that the majority of the previous studies reviewed in this paper support the tourism-led growth hypothesis.

Key words: tourism; economic growth; tourism-led growth hypothesis; growth-led tourism hypothesis

Introduction

The development of tourism has become one of the central issues taken up by many countries – in light of the potential benefits it has for the economy. Tourism has been discussed extensively in relation to growth, foreign exchange, sustainability, income, employment, cultural values, infrastructural development, and poverty-reduction, as well as the environmental and social impacts. One of the roles of tourism, according to Croes and Vanegas (2008), lies in the wealth and income transfer from residents of developed and developing countries to the residents of developing and less- developed countries.

Tourism expenditure can be considered as an alternative form of export, which means that it enables the export of other products leading to positive impacts on the quality of life of the destination's residents as well as enhancement of small business development (Ardahaey, 2011). Although much of the of the focus has been on primary and manufactured product exports, with authors generally asserting that each category has different effects on growth, international tourism might be considered as an export in a non-traditional way since it implies a source of receipts and consumption *in situ* (Cortés-Jiménez, Pulina, Prunera & Artis, 2009). This means- according to Ardahaey (2011)- that there is no tangible product to deliver and thus the consumer collects the service personally from the point of production and therefore the development enabled by the tourism sector has implications for other sectors in the economy. This contributes to the country's balance of payments, resulting in the generation of a lot of employment opportunities and tax revenues for government. Through tourism, the income and standards of living of developing countries can be raised (Croes & Vanegas, (2008). According to

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Mathieson and Wall (1992) tourism is a fragmented product and it is a very precarious export being sensible to external forces, highly elastic pricing and income as well as dependent on seasonal changes. In some countries tourism and exports are considered to be complementary channels that enhance economic growth and therefore this should be considered in the strategic and promotional policies adopted by governments and policy makers (Cortés-Jiménez et.al, 2009).

The tourism industry has evolved over the years. Globally, data from the United Nations World Tourism Organization (UNWTO) shows that the number of tourists that crossed international borders grew by 4% between January and June 2016 in comparison with the same period from the previous year. According to the UNWTO World Tourism Barometer, destinations worldwide received 21 million more international tourists (overnight visitors) in 2016 than 2015 bringing the total of international tourist's world over to 561 million in 2016.

Regionally, in 2016 Asia and the Pacific had the highest growth in international tourist arrivals (9%) followed by Africa with (+5%) growth, the Americas (4%) and Europe (+3%). The Middle East however reported an estimated decrease of 9% in international arrivals over the six-month period January to June 2016 (UNWTO World Tourism Barometer, 2016). World development indicators on travel and trade indicate that in 2013, international tourism receipts amounted to over US$ 1.381 billion; and they constituted a share of 6.1% of the total exports (Word Bank, 2015). As an export category, the UNWTO advances that tourism ranks fourth worldwide, after fuels, chemicals and food (WTO, 2015).

The commonly accepted argument on the contribution of tourism to economic growth has been widely verified empirically across the globe. The empirical literature on the causal relationship between tourism and economic growth is mainly fourfold. The first is the tourism-led growth hypothesis, which maintains that tourism is a major driver of economic growth. The second is the growth-led tourism hypothesis, which is of the view that economic growth strongly contributes to the growth in the tourism sector. The third view is that there is a bidirectional relationship between tourism and economic growth. The last view is that of neutrality, where tourism and economic growth do not Granger-cause one another.

Although numerous studies have empirically examined the causal relationship between tourism and growth, few studies have done a review of the existing literature, in order to determine whether the majority of previous studies support the tourism-led growth hypothesis or the growth-led tourism hypothesis. As such, the rest of the paper will discuss the role of tourism in economic growth followed by a review of international empirical literature on the causal relationship between tourism and economic growth; and finally draw some key lessons and recommendations from the study.

The role of tourism in economic growth

The relationship between tourism and economic growth is articulated through different channels. The theory argues that the number of tourists entering a country is an important factor for economic growth; since tourism spending provides foreign-exchange earnings. These earnings are used to import capital goods that produce goods and services, thereby leading to economic growth for the host nation (McKinnon, 1964; Balaguer & Cantavella-Jorda, 2002). Tourists' demand for accommodation, food, transport and services, as well as entertainment, leads to an increased production in goods and services, and income, as well as the creation of employment opportunities – all of which have positive effects on the economy (Balaguer & Cantavella-Jorda, 2002).

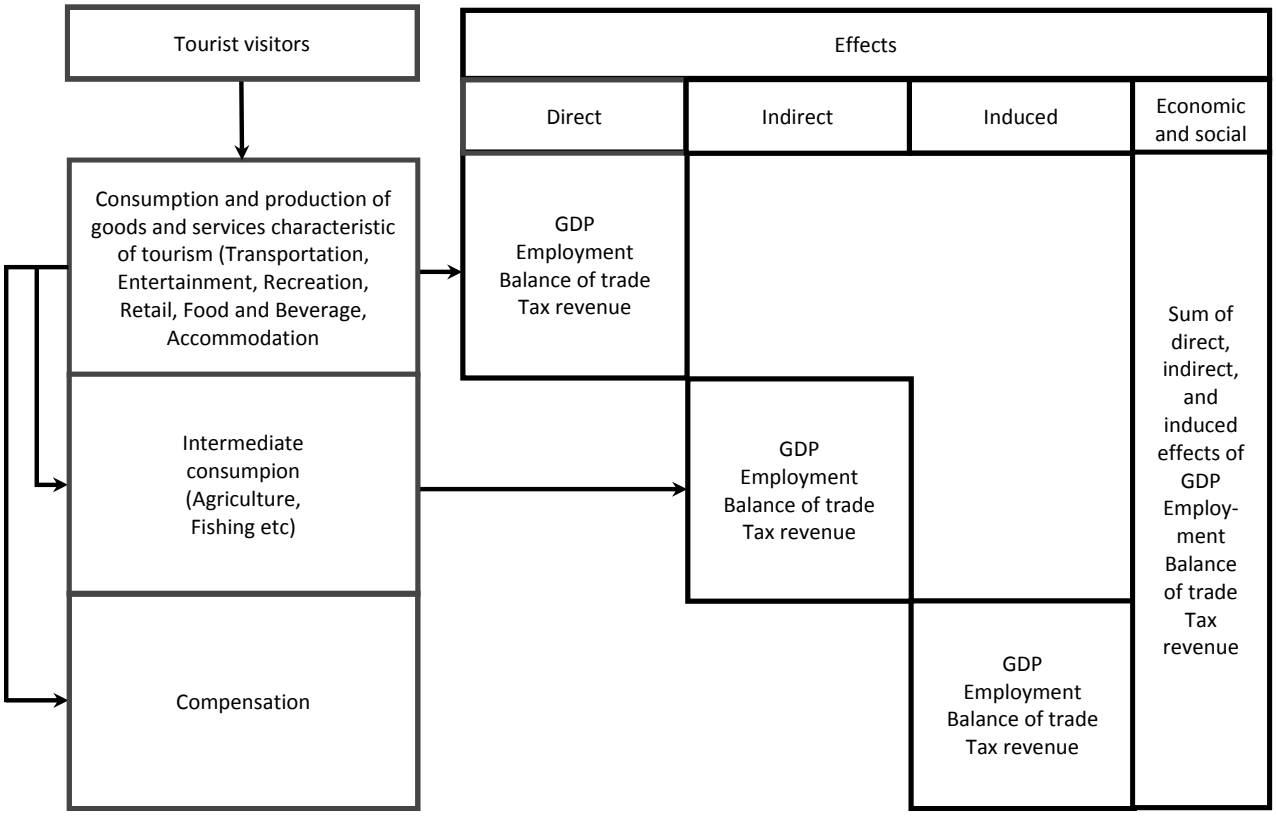
Tourism has a dynamic effect on the entire economy via spill-overs and externalities to other sectors of the economy (Marin, 1992). This implies that the growth in the tourism sector acts as an engine

for growth in other sectors that provide or consume products in the tourism sector (Marine, 1992, pp. 678-688). Tourism can also stimulate investment in new infrastructure and competition, create economies of scale, and allow for the diffusion of technical knowledge (Brida, Pereryra, Risso, Devesa & Aguirre, 2008, p. 12).

According to Ashley and Mitchell (2006), tourism development also contributes significantly in reducing poverty. The authors purport that this can be through the promotion of unskilled jobs and the provision of part-time or seasonal jobs - which can then help integrate people into long-term employment. The tourism industry also contributes to economic growth by increasing efficiency via competition between domestic firms and international tourists' destination (Bhagwati & Srinivasan, 1979; Krueger, 1980).

The effect of tourism on economic growth has also been acknowledged in a report by the UNWTO (2011). The UNWTO puts forward other aspects that link the tourism industry to economic growth. One such aspect is the creation of direct, indirect and induced forms of local employment through tourism. Direct employment is created through those working in tourism-related institutions, like hotels, restaurants, tourist stores, etc.; whilst indirect employment is created in industries that supply goods and services to the tourism sector, for example, agriculture, fishing, etc.

Figure 1
Impact of tourism on economic growth



Source: Adapted from Vellas (2011), Discussion paper prepared for the third meeting of T.20 Tourism Ministers, Paris.

Although the notion can be attributed to early work of tourism economists (Guthrie, 1961; Gerakis, 1965; Gray, 1966) the UNWTO has more recently strongly advocated the multiplier effects that tourism has on the economy through the existence of a foreign-income source. Another aspect put forward

by the UNWTO (2011) is that tourism also increases government income through the income tax earned from hotels and other kinds of tourist taxes. These include airport-exit duties, tourism-industry import duties, income tax levied on tourism institutions and practitioners, and capital-gains tax on the assets of tourist institutions. Figure 1 summarizes the channels through which tourism affects economic growth, as discussed by Vellas (2011).

The causal relationship between tourism and economic growth: Empirical evidence

Several empirical studies have been conducted on the causal relationship between tourism and economic growth. These studies have used time series data analysis, panel/cross sectional data analysis as well as input/ output analysis. A number of studies support the tourism-led growth hypothesis. Amongst them are studies that have used time series data analysis which include Balaguer and Cantavella-Jorda (2002); Chen and Chiou-Wei (2009); Durbarry (2004); Hye and Khan (2013); Obadiah, Odhiambo and Njuguna (2012); Gunduz and Hatemi-J (2005); Akinboade and Braimoh (2010); Kreishan (2015); Tang and Tan (2015); Mishra, Rout and Mohapatra (2011); Jalil, Mahmood and Idrees (2013); Risso and Brida (2008); Brida et al. (2008); Bento (2016); and Brida, Lanzilotta and Pizzolon (2016). Studies that used panel/cross sectional were amongst others Caglayan, Sak and Karymshakov (2012); Lee and Chang (2008); Lanza, Temple and Urga (2003); Sharma and Banningidadmath (2013); Atan and Arslanturk (2012); and Sequiera and Nunes (2008).

Balaguer and Cantavella-Jorda (2002) used a three variable model for Spain from 1975-1997 comprising real GDP, international tourism receipts and the effective real exchange rate, to examine the causal relationship between tourism and economic growth. The authors found that there was a cointegrating relationship between the two variables and Granger-causality tests (a statistical hypothesis test for determining whether one time series is useful in forecasting another) confirmed the tourism-led growth hypothesis. Chen and Chiou-Wei (2009) also confirm the tourism-led growth hypothesis in the case of Taiwan and South Korea. The study employed the EGARCH-M model with uncertainty factors to examine the causal relationship between tourism expansion and economic growth. Durbarry (2004) examined real exports and real GDP for Mauritius using VECM and Granger-causality tests between 1952 and 1999. The author found that tourism development Granger-causes economic growth. Hye and Khan (2013) employed the rolling window bounds testing approach in the case of Pakistan and observed a long-run relationship between tourism and economic growth as well as long-run unidirectional causality flow from tourism income to economic growth. Obadiah et al. (2012) use time series data from Kenya and an ARDL-bounds testing approach to examine the linkages between tourism and economic growth in a multivariate setting with trade as an intermittent variable. The finding from the study is a unidirectional causal flow from tourism development to economic growth both in the long and short run. Gunduz and Hatemi-J. A. (2005) employ leveraged bootstrap causality tests for Turkey from 1963-2002. The study confirmed unidirectional causality flow from tourism to economic growth. Akinboade and Braimoh (2010) examine the direction of causality between international tourism earnings and long-run economic growth in South Africa using Granger causality tests. The results from the study show that international tourism earnings Granger-cause real GDP in the short and long run. Kreishan (2015) investigates the tourism-led growth hypothesis for Bahrain using an Autoregressive Distributive Lag Model (ARDL) from 1990 to 2014 and finds a unidirectional casual flow from tourism to economic development. In Tang and Tan (2013), the tourism-led growth hypothesis in Malaysia is validated for eight out of the twelve tourism markets, after applying the recursive Granger-causality

test. Mishra et al. (2011) employ annual time series data for India and Granger-causality tests and find evidence of long-run unidirectional causality flow from tourism activities to economic growth. Jalil et al. (2013) employ the Autoregressive Distributed Lag (ARDL) model over Pakistan for the period of 1972 to 2011 and find that unidirectional causality runs from tourism to economic growth. Risso and Brida (2008) examine the contribution of tourism to economic growth in Chile using the Johansen cointegration test and a modified version of the Granger-causality test. The results indicate that, over the period, economic growth in Chile has been caused by the expansion of international tourism thereby supporting the tourism-led economic growth hypothesis. Brida et al. (2008) in the case of Mexico, between 1980 and 2007, use Granger causality tests to analyse tourism expenditures, real exchange rate and real GDP. The study finds a unidirectional causal flow from tourism development to economic growth. Bento (2016) employs quarterly time series cointegration methods for the period from 1995 to 2015 to assess the temporal causal link between tourism and economic growth in Portugal. The study disaggregates between domestic tourists and foreign tourists. The study finds that in the long-run tourism development precedes economic growth and confirm the tourism-led growth hypothesis. Brida et al. (2016) explore the identity of the nonlinearities present in the relationship between tourism and economic growth for Argentina and Brazil. Following the results of a study that validated the tourism-led growth hypothesis by Brida et al. (2015) for Argentina and Brazil, Brida et al. (2016) add a way to specify the format of the nonlinearity in the case of Brazil but no model was found to appropriately model the nonlinearity in the case of Argentina. However, in terms of direction of causality the results found in this paper are consistent with the previous ones.

Caglayan et al. (2012) found a unidirectional causality flow from tourism to economic growth in a panel of 135 countries for East Asia, South Asia and Oceania; and a unidirectional causality flow from economic growth to tourism in the case of countries in America and Latin America and the Caribbean. Lee and Chang (2008) investigate the causal relationship between tourism development and economic growth for OECD and non-OECD countries for 1990-2002 and find that the tourism-led growth hypothesis holds in the case of OECD countries whilst the feedback hypothesis was the case for non-OECD countries. Lanza et al. (2003) tested the ratio of tourism expenditure to total consumption expenditure and the ratio of the relative price of a tourist bundle of goods and services to consumer price deflator for 13 OECD countries. Using cointegration and Granger causality tests between 1977 and 1992, the study validates the tourism-led growth hypothesis. Sharma and Banningidadmath (2013) use panel data predictive regression modelling in the Pacific Island countries from 1985-2010 and find a unidirectional causal flow from tourism to growth. Sequiera and Nunes (2008) also validate the tourism-led growth hypothesis in the case of multiple countries from 1980 to 2002 using panel regression. The study tests real per capita GDP, the ratio of tourist arrivals to population, tourism receipts as a percentage of exports and as a percentage of GDP and other variables. Although a unidirectional causal flow from tourism to economic growth is found in all countries, the study also finds a decreasing effect of tourism on economic growth in small countries. Atan and Arslanturk (2012) use input-output analysis to examine the tourism and economic growth nexus based on the 2002 input-output table for Turkey. The study finds that tourism significantly contributes to the growth of the economy. Cárdenas-García, Sánchez-Rivero and Pulido-Fernández (2015) examine whether tourism growth influence economic development in a panel of 144 countries. The study groups the countries into two groups based on their different socioeconomic structures such as level of income per capita, infrastructure, training, or instability of the economic activity. The first group of countries characterise countries that showed a higher value of the synthetic index of economic development in 1991, where it has been demonstrated that tourism growth has led to an improvement of the economic development. The second group of countries are those that had a lower value of the synthetic index of economic development in 1991

where tourism growth has not influenced the improvement of their economic development. The study concludes that tourism causes economic growth only in those countries with a high level of development since the increase of tourist flows results in an expansion of tourism and, consequently, in a tourism growth that, in addition, contributes to improve socioeconomic conditions. In countries however, which had lower rates of economic development, although tourism growth positively influenced the economic growth of the country, it did not necessarily cause economic growth nor become a tool with the ability to increase its level of prosperity. Chiu and Yeh (2016) examine the threshold effects of the tourism-led growth hypothesis based on cross-sectional data of 84 countries. The study investigates the tourism development–economic growth nexus and finds a linear positive impact of international tourism receipts on economic growth, which confirms evidence of the tourism-led growth hypothesis. De Vita and Kyaw (2016) investigated the relationship between tourism specialization and economic growth while accounting for the absorptive capacity of host (tourism destination) countries, defined in terms of financial system development. The study employed a system generalized methods-of-moments (SYS-GMM) estimation methodology to investigate this relationship for 129 countries over the period 1995–2011. The results of the study conclude that the relationship between tourism specialization and economic growth is found to be positive and significant for middle- and high-income countries as they appear to gain considerably more from tourism specialization than low-income countries. In addition, the growth-enhancing effect of tourism specialization accrues to countries with a more developed financial system capable of supporting these countries' absorptive capacity from inbound tourism but at high levels of specialization, its impact on GDP growth begins to decline.

Other studies conform to the growth-led tourism hypothesis in terms of the causal relationship between tourism and economic growth. This hypothesis advances that for tourism development, policies must center on increasing economic growth. For example the studies that used time series analysis and validated the growth-led tourism hypothesis include Oh (2005) who examined the tourism-led growth hypothesis for South Korea between 1975 and 2001. Using a bivariate model as well as VAR and Granger causality tests, the study found that there was a unidirectional causal flow from economic growth to tourism. Payne and Merva (2010) used the Toda-Yamamoto causality test for Croatia and also find a unidirectional causal flow from GDP to tourism receipts. Katircioglu (2007) employs the bounds test for cointegration and Granger causality tests to investigate a long-run equilibrium relationship between tourism, trade and real income growth as well as the direction of causality for Cyprus. The study finds that GDP Granger-causes tourist arrivals. Odhiambo (2011) uses ARDL bounds testing and finds that in the long run, it is economic growth that drives the development of the tourism sector in Tanzania. In Suresh and Senthilnathan (2014) the causal relationship between economic growth and tourism earning in Sri Lanka during 1977-2012 is examined by employing Granger-causality tests using annual time series data. The results reveal that there is unidirectional causality flow from economic growth to tourism earning.

Some studies have found evidence of a bidirectional causal relationship between tourism and economic growth for various countries. The studies that employed time series analysis and found this relationship are Khalil, Mehmood and Waliullah (2007); Dristakis (2004); Demiroz and Ongan (2005); Lee and Chien (2008); Kim, Chen and Jang (2006); Cortés-Jiménez et al. (2009). Those that used panel/ crossectional data analysis are Seghir, Mostefa, Abbes and Zakarya (2015); Tugcu (2014); Apergis and Payne (2012); Chou (2013); Seetanah (2011).

Khalil et al. (2007) used Granger cointegration and causality concepts and methods to examine tourism and economic growth in Pakistan. The study showed that the two variables have a long-run relationship and a bidirectional causal relationship. Dritsakis (2004) used Johansen cointegration and error

correction as well as Granger-causality tests in the case of Greece from 1960 to 2000 and confirmed a bidirectional causality relationship between international tourism and economic growth. Demiroz and Ongan (2005) also adopted the same approach in the case of Turkey between 1980 and 2004 and also confirmed the feedback hypothesis. Lee and Chien (2008) examine structural breaks in the stability of the long-run relationships between tourism development and real GDP in Taiwan for the 1959–2003. The study empirically investigates the co-movements and the causal relationships among real GDP, tourism development, and the real exchange rate in a multivariate model. The empirical evidence shows that the causality between tourism and economic growth is bi-directional. Kim et al. (2006) examined international tourist arrivals and GDP in Taiwan using quarterly data from 1971 to 2003 and annual data from 1956 to 2002. Granger-causality tests reveal that in Taiwan, tourism and economic development reinforce each other in the form of a bi-directional causality relationship. Cortés-Jiménez et al. (2009) examines for Italy and Spain for the period 1954 to 2000 the causal relationship between exports, tourism and economic growth. The study employs time series Granger-causality methods and finds a bidirectional relationship exists between economic growth, exports and international tourism expansion in both countries.

Seghir et al. (2015) analyse the relationship between tourism spending and economic growth in 49 countries, using the panel co-integration and panel Granger causality tests. The results indicate bidirectional causality between tourism spending and economic growth. The authors highlight that this implies that governments need to prioritize the allocation of resources across industries to ensure better tourism and economic outcomes. Tugcu (2014) uses panel data for the period 1988-2011 for the Mediterranean Region to revisit the tourism and economic growth nexus. The study finds a bidirectional causal relationship between tourism and economic growth and that the direction of causality depends on the country and the tourism indicator used. Apergis and Payne (2012) examined the causal relationship between tourism and economic growth for a panel of nine Caribbean countries. Panel error correction modelling used in the study revealed that tourism and economic growth Granger-cause each other. Chou (2013) examines causal relationships between tourism spending and economic growth in 10 transition countries for the period 1988–2011. Using panel causality analysis, the results support and are consistent with the feedback hypothesis for four of the ten countries namely the Czech Republic, Poland, Estonia and Hungary. Seetanah (2011) uses panel data on 19 island economies over the period 1990 to 2007 to explore the potential contribution of tourism on economic growth and development within the conventional augmented Solow growth model. The study employs GMM methods and finds that tourism significantly contributes to the economic growth of island economies. Granger causality analysis further reveals a bidirectional relationship between tourism and growth.

Lastly, the neutrality hypothesis holds that no causality exists between tourism and economic growth. For example, Brida, Monterubbianesi and Zapata-Aguirre (2011) also did not find evidence of causality between GDP and tourism in Brazil between 1965 and 2007 after employing two different time series econometric methodologies to two distinct data sets. Arslanturk (2011) examined the causal link between tourism receipts and GDP for Turkey using the Rolling Window and time-varying coefficients estimation methods. The study analysed the Granger-causality based on Vector Error Correction Model (VECM). The findings from the study show no Granger-causality between the series. Katircioglu (2009) also found no causal relationship between tourism and economic growth in the case of Turkey between 1960 and 2006 after employing bounds test with an auto regressive distributed lag approach to test international tourist arrivals, real exchange rates and real GDP. Kasimati (2011) using VECM and Granger causality tests for Greece from 1960 to 2010 also finds no causality between tourism and economic growth after testing international tourist arrivals, real effective exchange rate and real GDP.

Eugenio-Martins and Morales (2004) find no causality in a panel GLS estimation for Latin America from 1980-1997.

Table 1 gives a summary of the various studies that have been undertaken on the causal relationship between tourism and economic growth. The table is organised according to the direction of flow of causality and includes i) studies on causality flow from Tourism to Economic Growth ii) studies on causality flow from Economic Growth to Tourism iii) studies on a bidirectional relationship between Tourism and Economic Growth and iv) studies that find no causal relationship between Tourism and Economic Growth.

Table 1
Empirical studies on the causal relationship between tourism and economic growth

Studies on i) causality flow from tourism to economic growth			
Author/s and year	Country	Method	Conclusion
• Balaguer & Cantavella-Jordan (2002)	• Spain (1975-1997)	• Granger Causality	T→G
• Chen & Chiou-Wei (2009)	• Taiwan and South Korea	• E_ GARCH	T→G
• Durbarry (2004)	• Mauritius (1952-1999)	• VECM, Granger causality	T→G
• Hye & Khan (2013)	• Pakistan	• Granger Causality	T→G
• Caglayan et al. (2012)	• 135 countries in East Asia, South Asia and Oceania	• Granger Causality	T→G
• Obadiah et al. (2012)	• Kenya	• Time Series ARDL Bounds Testing	T→G
• Lee & Chang (2008)	• OECD and non OECD countries (1990-2002)	• Panel data	T→G for OECD Countries
• Gunduz & Hatemi (2005)	• Turkey (1963-2002)	• Bootstrap Causality	T→G
• Sharma & Banningidadmath (2013)	• Pacific Island Countries (1985-2010)	• Panel data regression	T→G
• Akinboade & Braimah (2010)	• South Africa	• Granger Causality	T→G
• Lanza et al. (2003)	• 13 OECD Countries (1977-1992)	• Unit Root Tests, cointegration test (Johansen and Juselius)	T→G
• Kreishan (2015)	• Bahrain (1990-2014)	• ARDL Bounds testing	T→G
• Tang & Tan (2015)	• Malaysia (1975-2011)	• Granger-causality	T→G
• Mishra (2011)	• India	• Granger-causality	T→G
• Jalil et al. (2013)	• Pakistan (1972-2011)	• ARDL Bounds Testing	T→G
• Risso & Brida (2008)	• Chile (1986-2007)	• Granger-causality	T→G
• Atan & Arslanturk (2012)	• Turkey	• Input–Output Analysis	T→G
• Brida et al (2008)	• Mexico	• Unit Root Tests, cointegration test (Johansen and Juselius), Granger-causality tests	T→G
• Sequiera & Nunes (2008)	• Multiple countries	• Panel regression	T→G
• Bento (2016)	• Portugal	• Time series analysis	T→G
• Brida et al. (2016)	• Brazil and Argentina	• Time series analysis	T→G
• Cárdenas-García et al. (2015)	• 144 countries	• Panel regressinon	T→G
• Chiu & Yeh (2016)	• 84 countries	• Cross-sectional analysis	T→G
• De Vita & Kyaw (2016)	• 129 countries	• Panel system generalized methods-of-moments (SYS-GMM)	T→G
Studies on ii) causality flow from economic growth to tourism			
Author/s and Year	Country	Method	Conclusion
• Oh (2005)	• South Korea (1975-2001)	• VAR Engle and Granger Causality	T← G
• Payne & Merva (2010)	• Croatia	• Tada Yamamoto Causality	T← G
• Katircioglu (2007)	• Cyprus	• Granger Causality	T← G
• Odhiambo (2011)	• Tanzania	• ARDL Bounds Testing	T← G
• Suresh & Senthilnathan (2014)	• Sri-Lanka • (1977-2012)	• Granger-causality	T← G

Table 1 **Continued**

Studies on iii) bidirectional relationship between tourism and economic growth			
Author/s and year	Country	Method	Conclusion
• Seghir et al. (2015)	• 49 Countries	• Granger Causality	T↔G
• Tugcu (2014)	• Mediterranean Region (1988-2011)	• Panel data	T↔G
• Apergis & Payne (2012)	• 9 Caribbean Countries	• Panel Error Correction Granger-causality	T↔G
• Khalil et al. (2007)		• Granger-causality	T↔G
• Dritsakis (2004)	• Greece (1960-2000)	• Granger-causality	T↔G
• Demiroz & Ongan (2005)	• Turkey (1980-2004)	• Granger-causality	T↔G
• Chou (2013)	• 10 Transition Countries (1988-2011)	• Panel Granger-causality	T↔G Czech Republic, Poland, Estonia, Hungary
• Lee & Chien (2008)	• Taiwan (1959-2003)	• Granger-causality	T↔G
• Kim et al. (2006)	• Taiwan	• Granger-causality	T↔G
• Cortés-Jiménez et al. (2009)	• Italy and Spain	• Time series Granger-causality	T↔G
• Seetanah (2011)	• 19 Island economies (1990-2007)	• GMM, Granger-causality	T↔G
Studies on iv) no causal relationship between tourism and economic growth			
Author/s and year	Country	Method	Conclusion
• Eugenio-Martins & Morales (2004)	• Latin America (1980-1997)	• Panel GLS	T ≠G
• Brida et al (2011)	• Brazil (1965-2007)	• Time series analysis	T ≠G
• Arslanturk (2011)	• Turkey	• Rolling Window VECM	T ≠G
• Katircioglu (2009)	• Turkey (1960-2006)	• ARDL Bounds Testing	T ≠G
• Kasimati (2011)	• Greece (1960-2010)	• VECM, Granger-causality	T ≠G

T→G means Tourism granger causes Economic Growth
T←G means Economic Growth causes Tourism
T↔G means there is a bidirectional causal relationship between Tourism and Economic Growth
T≠G means Tourism does not granger cause Economic Growth

Conclusion

The relationship between tourism and economic growth has been discussed extensively in the previous literature on developed and developing countries. The tourism industry can drive economic growth through various channels. These channels have direct, indirect and induced effects on the economic and social status of the economy. Economic growth, on the other hand, might boost tourism through the development of tourist facilities and infrastructures. Currently, there are four main views on the causal relationship between tourism and economic growth. Firstly, there is a unidirectional causal flow from tourism to economic growth (the tourism-led growth hypothesis). Secondly, there is a unidirectional causal flow from economic growth to tourism (the growth led tourism hypothesis). Thirdly, a bidirectional causal relationship exists between tourism and economic growth, which is known as the feedback hypothesis. The fourth view is the neutrality hypothesis, where neither of the variables influences the other. The findings from the literature reviewed in this study show that the relationship between tourism and economic growth differs from country to country; and it is dependent on the methodology used. On balance, this paper finds that the majority of the previous studies on the causal relationship between tourism and economic growth tend to support the tourism-led growth hypothesis. In addition, most of these studies tend to employ time-series analysis, rather than panel/cross-sectional data analysis. A basis for further research may be to analyse the causal relationship between tourism and economic growth through the lens of more refined techniques.

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